

# **DEVELOPING PREDICTION MODEL OF LOAN RISK IN BANKS USING DATA MINING**

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## **OVERVIEW :**

In 2016, Aboobyda Jafar Hamid and Tarig Mohammed Ahmed presented a loan risk prediction model based on the data mining techniques, such as Decision Tree (J48), Naïve Bayes (NB) and BayseNet approaches. The procedure followed was training set preparation, building the model, Applying the model and finally. Evaluating the accuracy. This approach was implemented using Weka Tool and considered a dataset with eight attributes, namely, gender, job, age, credit amount, credit history, purpose, housing, and class. Evaluating these models on the dataset, experimental results concluded that, J48 based loan prediction approach resulted in better accuracy than the other methods.

## **MERITS :**

- Three algorithms - j48, bayesNet and naiveBayes algorithms was used to build a predictive models that can be used to predict and classify the applications of loans that introduced by the customers to good or bad loan by investigate customer behaviors and previous pay back credit.
- After applying classification's data mining techniques algorithms which are j48, bayesNet and naiveBayes, we find that the best algorithm for loan classification is j48 algorithm.
- J48 algorithm is best because it has high accuracy and low mean absolute error.

## **DEMERITS :**

- Decision tree often involves higher time to train the model.
- Decision tree training is relatively expensive as the complexity and time has taken are more.
- The Decision Tree algorithm is inadequate for applying regression and predicting continuous values.
- BayesNet Requires greater statistical expertise than some other methods